



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,374	09/19/2006	Junhyoung Eom	WELL.P0121US	8877
7550 08/06/2008				
John W Renner Renner Otto Boisselle & Sklar 1621 Euclid Avenue Nineteenth Floor Cleveland, OH 44115			EXAMINER AYCHILLHUM, ANDARGIE M	
			ART UNIT 2841	PAPER NUMBER
			MAIL DATE 08/06/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/593,374

**Applicant(s)**

EOM, JUNHYOUNG

**Examiner**

ANDARGIE M. AYCHILLHUM

**Art Unit**

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CIS-100)
- 4) ☒ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date 09/19/08

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Objections***

2. Claim 1 recites the limitation "the structure is constructed using one connector for each wire harness". There is insufficient antecedent basis for this limitation in the claim.

So, the term wire harness is unclear because the claim does not clearly redefine the element.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maue et al. (5,478,244) in view of Suzuki et al. (US 6,870,096 B2).

**Regarding to claim1**, Maue et al. discloses an integrated electronic module structure for vehicles, the structure (**14**) comprising: (See Maue et al. figures **1-2**).

a first printed circuit board **(33)** having fuses **(15)** and relay circuits **(17)** mounted thereon; (column **3**, lines **26-50**) thereon;

a second PCB **(37)** and

a PCB **(33 and 37)** connecting unit for electrically (column **3**, lines **27-34**) the first **(33)** and second PCB **(37)** (column **3**, lines **43-50**); wherein the structure is constructed using one connector for each wire harness **(13)** (column **3**, lines **43-50**).

However, Maue et al. does not specifically disclose the second PCB having input/output (I/O) terminals and a PCB connecting unit for electrically connecting the first and second PCBs which directly integrates the first PCB with the I/O terminals of the second PCB.

But, Suzuki et al. discloses disclose a second PCB **(3)** having input/output (I/O) terminals **(58, 5)** and a PCB connecting unit **(13)** for electrically connecting a first PCB **(2)** and the second PCBs **(3)** which directly integrates the first PCB with the I/O terminals **(58, 5)** of the second PCB **(3)** (see fig. 3).

Therefore, it would be obvious to one having ordinary skill in the art at the time the invention was made to provide the terminals of Suzuki et al. on the second PCB of Maue et al. and to utilize the connecting unit of Suzuki to connect the first and second PCB of Maue et al. in order to provide plurality of connecting terminals to connect additional circuit components on the PCBs and to create an electrical connection between circuit components disposed on the two PCBs to integrate different functions of the circuit components.

**Regarding to claim 2**, Maue et al. as modified by Suzuki et al. further discloses the connector comprises a multi-pole connector **(39 of Maue et al)**, and

A circuit connected between the first PCB **(33)** and the I/O terminals (58, 5 of Suzuki et al.) of the second PCB **(37Maue et al.)**, and a circuit connected between the second PCB **(37)** and I/O connectors **(58, 5 of Suzuki et al.)** of the second PCB **(37 of Maue)** are integrated in one multi-pole connector **(39)**, and thus the first PCB **(33)** and the second PCB **(37)** can be constructed using one multi-pole connector **(39)** for each wire harness **(13)**. (Column 3, lines 43-50) (See figures 1 and 2).

**Regarding to claim 3 and 7**, Maue et al. discloses the first PCB **(33)** is a junction box **(11)** for vehicles. (See figure 1).

**Regarding to claim 4 and 8**, Maue et al. discloses the second PCB **(37)** is an electronic control module **(19)** for vehicles. (Column 4, lines 34-36) (see figure 14).

**Regarding to claim 5**, Maue et al. as modified by Suzuki et al. further discloses the PCB **(33)** connecting unit is composed of connecting pins **(30 of Suzuki et al.)**.

**Regarding to claims 6 and 10**, Maue et al. discloses the connecting pins (58, 5 of Suzuki et al.) are directly inserted into the first PCB **(33)** and into a part

corresponding to the I/O terminals (121) of the second PCB (37), then soldered, and external injection molded parts (53) are formed to have connectors that constitute a pair of male (98) and female connectors (100) together with the multi-pole connectors (39) of the wire harness (13). (Column 4, lines 37-59).

**Regarding to claim 9**, Maue et al. as modified by Suzuki et al. further discloses wherein the PCB (33 of **Maue et al.**) connecting is composed of connecting pins (30 of **Suzuki et al.**).

#### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDARGIE M. AYCHILLHUM whose telephone number is (571)270-1607. The examiner can normally be reached on (Mon-Fri from 8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-1984. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2859

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dean A. Reichard/  
Supervisory Patent Examiner, Art Unit 2841

A.A.  
July 30, 2008